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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,744	08/04/2006	Jea-Sam Lee	2017-101	5706
53706 IPLA P.A. 3550 WILSHIRE BLVD. 17TH FLOOR LOS ANGELES, CA 90010	7590 12/09/2009		<div>EXAMINER</div> <div>KEMMERLE III, RUSSELL J</div>	
			<div>ART UNIT</div> <div>1791</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE</div> <div>12/09/2009</div>	<div>DELIVERY MODE</div> <div>PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/597,744

**Applicant(s)**

LEE, JEA-SAM

**Examiner**

RUSSELL J. KEMMERLE III

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/226)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 November 2009 has been entered.

#### ***Claim Rejections - 35 USC § 112***

In view of the amendments made to the claims the previous rejection under 35 USC §112, second paragraph is withdrawn.

Claims 1-5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the voids of the mold are "formed completely to outside of the gypsum mold", it is unclear what is meant by this term.

Claim 3 recites that the mold have "voids formed through inside to outside", it is unclear what is meant by this term.

Claims 2-5 and 7 are additionally rejected based on their dependence from these claims.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 4, 5 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 4 recites that the step of supplying air to produce the voids is carried out when more than 50% of the gypsum sludge is solidified. Support for this limitation was not found in the specification as originally filed. If support for such a limitation is present in the specification as originally filed but missed by the Examiner, the Applicant is invited to point where such support is found in the response to this Office action.

***Claim Rejections - 35 USC § 103***

Claims 1-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blackburn '109 (US Patent 2,584,109) in view of Blackburn '110 (US Patent 2,584,110), Faessle (US Patent 4,541,471) and Nemeskeri (US Patent 6,918,753).

The Blackburn references both disclose a method of press molding a clay object as well as a pressing machine and a method of making a mold for such an apparatus. The mold disclosed as preferably a gypsum mold in a housing with air tubes running through the mold to allow pressurized air to assist in removing the shaped clay from the

mold. The housings contain an air supply hole connected to an air supply means to introduce the pressurized air in to the mold.

The gypsum mold of the Blackburn references has voids inside for removing moisture and supplying air to inside the mold. The limitation of current claim 1 of how and when the voids are formed is not given any weight since claim 1 is directed to an apparatus, and therefore all that is required is that the voids are present in the mold, how the voids are formed is not relevant.

Faessle discloses a gypsum mold used for shaping materials that includes a wire net running through the gypsum mold across the entire depth of the mold with a porous hose for supplying air connected to the wire net (Col 4 lines 38-39, Fig).

Nemeskeri discloses a pressing machine that includes a frame having an upper mold housing which moves up and down and a lower mold housing that moves back and forth (horizontally) in order to allow for easier removal of the molded piece (see Figs. 8-15).

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant, to have used the gypsum molds of the Blackburn references in a machine as taught by Nemeskeri and having a wire net running through the mold as taught by Faessle. This would have been obvious because Nemeskeri discloses that the horizontal movement allows for easier removal of the pressed product and the wire net of Faessle would strengthen the gypsum mold. It would be further obvious that some form of control means would be required to control the pressing time and pressure, as well as the air supply.

The prior art does disclose a control means which could be configured in any way desired. Since claim 1 recites an apparatus, all that is required to meet the limitations is that the same structure be present in or rendered obvious by the prior art. When the control means is configured to start supplying air would be how the apparatus is used, and is therefore not given any weight in the apparatus of claim 1. Additionally, claim 1 as currently amended to recite that the control means are configured to start the air supply at a moment of ejecting air into the mold. The moment the air supply is started into the mold would have to be the moment the control means is configured to start the air.

Referring to claim 2, while the prior art does not specifically disclose that the drive means are hydraulic, the use of hydraulics to control the movement of a press is extremely well known in the art and would have been obvious to one of ordinary skill at the time of invention by applicant.

Referring to claim 3, Blackburn '109 discloses that a hunk of clay is placed in the mold and pressed, this would require that the clay be cut to a suitable size prior to being placed in the mold in order to ensure that the proper amount of clay is used (Claim 1). One of ordinary skill in the art would understand that prior to molding the clay should be kneaded in order to remove air so that air bubbles are minimized in the final piece, and that after molding the piece would be dried and fired as is traditionally done with ceramic articles. Blackburn '109 discloses that the air pressure is impressed against the pressed clay prior to the release of the molding pressure, which would result in some amount of continuous air supply occurring during some portion of the pressing

and casting step (Col 6 lines 5-9). This application of air pressure through the mold would result in some degree of an air film between the mold and the clay. Further, engraving and glazing of a ceramic article prior to firing is notoriously well known as methods of providing a decorative surface on ceramic articles, and would have been obvious to one of ordinary skill in the art as a means of providing a ceramic article with the desired final appearance.

Referring to claim 4, Faessle discloses a method of making a gypsum mold by providing a molding housing which has air supply lines running through it into which a prototype piece is placed, followed by filling the housing with gypsum which is allowed to dry around the prototype to form the mold surfaces. During the drying process compressed gas is flowed through the gypsum to assist in water removal (Col 2 lines 3-24). Since air is flowed through the mold over the entire drying process this would include supplying air to the mold when over 50% of the sludge is solidified.

Referring to claim 5, since the Blackburn references are silent as to the temperature of the clay prior to the pressing it is assumed to be at room temperature. Further Blackburn '109 discloses that the clay to be pressed may be wet or damp, which one of ordinary skill in the art would understand would encompass a moisture content of 15-20 wt% (Col 5 lines 73-74).

Referring to claim 7, while the cited references do not specifically disclose the amount of time the clay is pressed, one of ordinary skill in the art would understand that the pressing would only have to be done for a period of time sufficient to form the clay into the desired shape, and to optimize this time to 1-2 seconds.

***Response to Arguments***

Applicant's arguments filed 25 November 2009 have been fully considered but they are not persuasive.

Applicants argue that the prior art does not teach a gypsum mold with voids formed through the gypsum mold by blowing air into the gypsum mold during solidifying. Applicants further argue that the prior art does not teach a control means for starting the air supply means at a moment of ejecting air into the mold.

Both of these limitations are explicitly addressed above in the rejection of claim 1 above under 35 USC §103.

Applicants further argue that the air film between the clay and the mold is not formed while pressing and casting.

This limitation is explicitly addressed above in the rejection of claim 3 under 35 USC §103, specifically as being taught by Blackburn '109.

As Applicant has not addressed this points which were included in the previous Office action the arguments will not be further addressed here.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RUSSELL J. KEMMERLE III whose telephone number is (571)272-6509. The examiner can normally be reached on Monday through Thursday, 7:00-5:00 EST.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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